Dell Networking W-AP93H Access Point

The multifunction Dell Networking W-AP93H is an indoor 802.11n access point (AP) with four Ethernet ports designed to easily mount over Ethernet wall plates. It uses existing structured cabling systems to provide secure wired and WiFi network access for dormitories, classrooms, hotels, small offices, medical clinics and multi-tenant environments.

This compact, high-speed AP delivers wire-like performance at data rates up to 300Mbps, is built to provide years of trouble-free operation and is backed by Dell's extended lifetime warranty.

Working with the Dell Networking W-Series line of centralized mobility controllers, the W-AP93H greatly simplifies RF coverage planning and significantly reduces wireless LAN (WLAN) deployment costs while delivering secure, high-speed network services for both wireless and wired devices.

802.11n enables the use of wireless as a primary connection with speed and reliability comparable to a wired LAN. It also increases performance by utilizing techniques such as channel bonding, block acknowledgement and MIMO radios. Advanced antenna technology also increases range and reliability.

The key to ensuring wire-like performance and reliability is W-Series unique Adaptive Radio Management™ (ARM) and spectrum analysis capabilities, which manage both the 2.4GHz and 5GHz radio bands to deliver maximum client performance while mitigating any RF interference.

The Dell W-AP93H can be configured through the Mobility Controller to provide WLAN access with part-time air monitoring, dedicated air monitoring for wireless IPS and spectrum analysis, Remote AP (RAP) functionality or secure enterprise mesh. The W-AP93H features a 10/100/1000Base-T Ethernet "uplink" interface and can operate from standard 802.3af power-over-Ethernet (PoE) sources or a 12V DC power supply.

In addition, the W-AP93H offers four 10/100Base-T Ethernet "downlink" interfaces to securely attach wired devices.

Purpose-built 802.11n 300Mbps access point and 4-port Ethernet switch. Designed to easily mount over Ethernet wall plate and uses existing structured cabling to provide secure wired and WiFi network access.

Specifications

Operating mode

- 802.11 a/b/g/n access point (AP)
- Campus AP, air monitor (AM) and spectrum monitor
- Remote AP, AM and spectrum monitor

Radios

- Software-configurable single radio capable of supporting 2.4GHz or 5GHz
- 802.11n capable, implementing 2x2 MIMO with two spatial streams, providing up to 300Mbps data rate

RF management

- Automatic transmit power and channel management control with auto coverage hole correction via ARM
- Spectrum analysis scans the 2.4GHz and 5GHz radio bands to provide increased visibility into non-802.11n RF interference sources and their effect on 802.11n channel quality

Advanced features

- Remote AP, spectrum analysis, secure enterprise mesh and wireless intrusion protection
- MACSec security for authorization and data encryption between the AP ports and the wired access layer (requires MACSec support on the wired edge switch)
- Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys
- SecureJack-capable for secure tunneling of wired Ethernet traffic

Antenna

- Integrated omni-directional antenna elements
  - 2.4GHz/2.5dBi
  - 5GHz/4.0dBi

Wireless radio specifications

- AP type: Single radio, dual-band 802.11n indoor
- Supported frequency bands (country-specific restrictions apply):
  - 2.400–2.4835GHz
  - 5.150–5.250GHz/5.250–5.350GHz/5.470–5.725Hz/5.725–5.850GHz
- Available channels: Controller-managed, dependent upon configured regulatory domain
- Platform supports dynamic frequency selection (DFS) to allow optimal usage of available RF spectrum
- Supported radio technologies:
  - 802.11b: Direct-sequence spread-spectrum (DSSS)
  - 802.11a/g/n: Orthogonal frequency division multiplexing OFDM)
  - 802.11n: 2x2 MIMO with up to two spatial streams
- Supported modulation types:
  - 802.11n: 2x2 MIMO with up to two spatial streams
  - 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM
- Transmit power: Configurable in increments of 0.5dBm
- Maximum transmit power (aggregated for two active transmit chains):
  - 2.4GHz: 21dBm (limited by local regulatory requirements)
  - 5GHz: 21dBm (limited by local regulatory requirements)
- Maximum Ratio Combining (MRC) for improved receiver performance
- Cyclic Delay Diversity (CDD) for improved downlink RF performance
- Association rates (Mbps):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n: MCS0–MCS15 (6.5Mbps to 300Mbps)
- 802.11n High-Throughput (HT) support: HT 20/40
- 802.11n Packet Aggregation: A-MPDU, A-MSDU

Power

- 48V DC 802.3af PoE or 802.3at PoE+
- 12V DC external AC supplied power (adapter sold separately)
- Maximum power consumption: 9W

Interfaces

- Network:
  - 1x10/100/1000Base-T Ethernet (RJ-45), auto-sensing link speed and MDI/MDX
  - 4x10/100Base-T Ethernet (RJ-45), auto-sensing link speed and MDI/MDX
  - One passive RJ 45 pass-through interface
- Power:
  - One DC power connector
- Other:
  - One RJ-45 console interface

Mounting

- Standard:
  - Mount plate, supporting worldwide electrical wall box standards

Mechanical

- Dimensions/Weight (unit, with mount bracket):
  - Unit: 760 g (1.68 lb), 130 x 143 x 35 mm/425 g

Environmental

- Operating:
  - Temp: 0°C to 40°C (32°F to 104°F)
  - Humidity: 5 to 95% non-condensing
- Storage and transportation temperature range:
  - Temp: –40°C to +70°C (–40°F to +158°F)

Certifications/Regulatory

- Wi-Fi certified 802.11a/b/g/n

Product meets EMC, safety and wireless standards of over 50 countries inclusive of; USA (FCC), Canada, EU, Japan, Korea, China. For more country-specific regulatory information and approvals, please see your Dell representative.

Minimum OS version

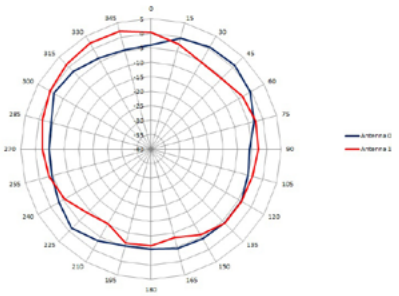
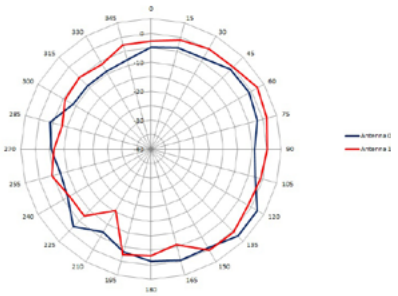
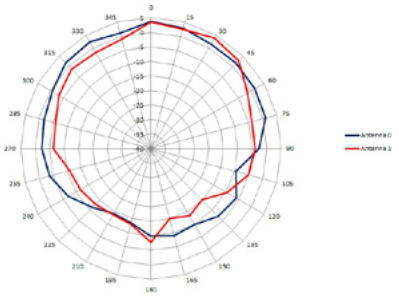
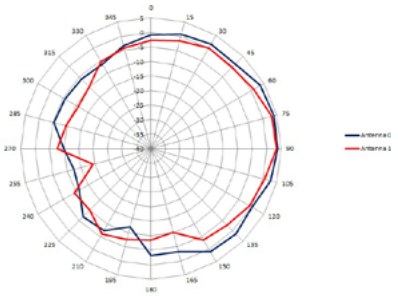
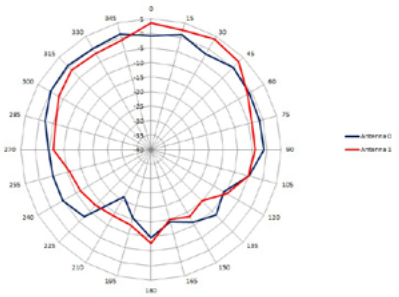
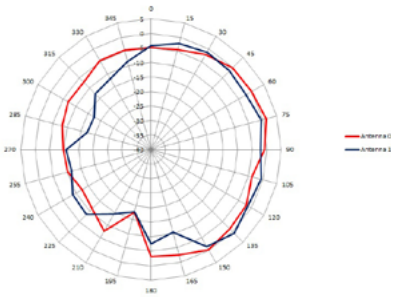
- 6.1.3.0

Extended Life Warranty*

W-AP93H RF performance table				
	Max TX power per active TX chain (dBm)	RX sensitivity (dBm)	Max TX power per active TX chain (dBm)	RX sensitivity (dBm)
	2.4GHz		5GHz	
802.11b				
1Mbps	18	-94	-	-
2Mbps	18	-94	-	-
5.5Mbps	18	-93	-	-
11Mbps	18	-91	-	-
802.11a/g				
6Mbps	18	-92	18	-92
9Mbps	18	-91	18	-91
12Mbps	18	-87	18	-87
18Mbps	18	-86	18	-86
24Mbps	18	-84	18	-84
36Mbps	15	-82	15	-82
48Mbps	14	-79	14	-79
54Mbps	14	-76	14	-76
802.11n HT20				
MCS0	18	-92	18	-92
MCS1	17	-90	17	-90
MCS2	17	-88	17	-88
MCS3	16	-85	16	-85
MCS4	16	-81	16	-81
MCS5	15	-79	15	-79
MCS6	15	-77	14	-77
MCS7	14	-73	13	-73
MCS8	18	-92	18	-92
MCS9	17	-90	17	-90
MCS10	17	-88	17	-88
MCS11	16	-85	16	-85
MCS12	16	-81	16	-81
MCS13	15	-79	15	-79
MCS14	15	-77	14	-77
MCS15	14	-73	13	-73
802.11n HT40				
MCS0	18	-92	18	-92
MCS1	17	-90	17	-90
MCS2	17	-88	17	-88
MCS3	16	-85	16	-85
MCS4	16	-81	16	-81
MCS5	15	-79	15	-79
MCS6	15	-77	14	-77
MCS7	14	-73	13	-73
MCS8	18	-92	18	-92
MCS9	17	-90	17	-90
MCS10	17	-88	17	-88
MCS11	16	-85	16	-85
MCS12	16	-81	16	-81
MCS13	15	-79	15	-79
MCS14	15	-77	14	-77
MCS15	14	-73	13	-73

Maximum capability of the hardware provided. Maximum transmit power will be limited by local regulatory settings.

W-AP93H antenna plots

	H-Plane (top view)	E-Plane (side view)
2.45GHz		
5.2GHz		
5.8GHz		

Ordering information

Part number	Description
W-AP93H	W-AP93H AP (802.11a/n and 802.11b/g/n): Integrated antennas. Single radio, dual band AP with built-in 4-port 10/100Mb Ethernet switch, 300Mbps per radio.
W-AP-AC-UN	12V DC Universal AC Power Adapter Kit: North America, Japan, United Kingdom, Italy, EC (Schuko), Australia, China, India and Korea
AP-DC-CAR	12V DC Car Power Adapter Kit

*Select PowerConnect products carry an Extended Life Warranty with Basic Hardware Service. Warranty covers repair or replacement of the product for as long as it remains in use by the customer. In the event of discontinuance of product manufacture, Dell Extended Life Warranty extends until five (5) years after end of product model sales. Warranty limits any power supply, antennae or accessories to one (1) year from date of purchase. Warranty does not include troubleshooting, configuration, or other advanced service provided by Dell ProSupport. The Extended Life Limited Hardware Warranty is not transferrable. For more information see dell.com/warranty.

Learn More at Dell.com/Networking